

WATER-SECURE AFRICA (WASA) INITIATIVE

A BRIEFING ON A COLLABORATIVE INITIATIVE TO HARNESS
BIG DATA FOR IMPROVED WATER MANAGEMENT

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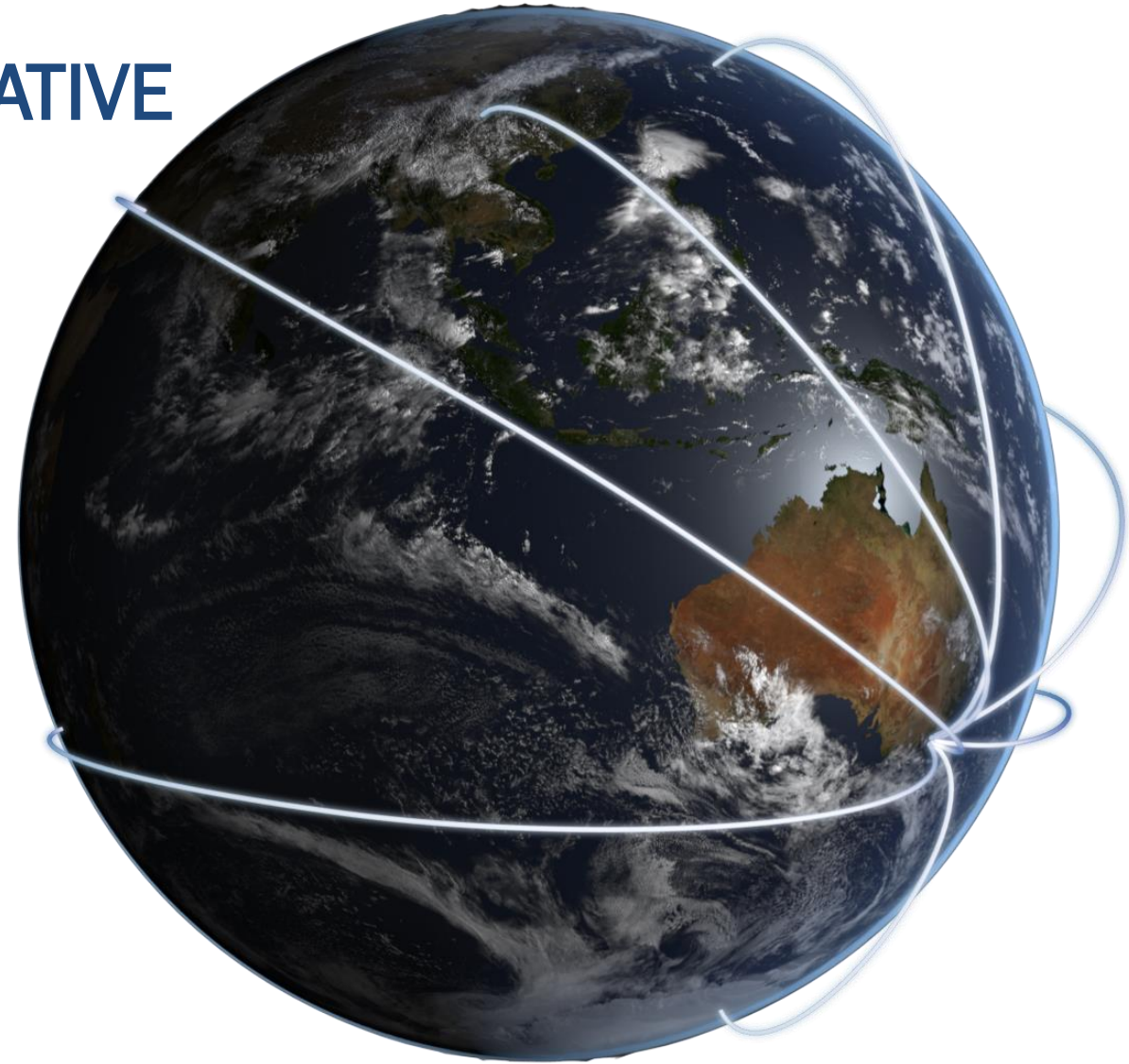


Image Source: Dr. Stuart Minchin, Geoscience Australia

What is WASA?

A research-for-development initiative with African and international partners that leverages the latest advances in earth observation and ICTs to strengthen water security. Builds on the African Water Resources Management Priority Action Program 2016-2025, endorsed by AMCOW and AUC.

What will it do?

Strengthen water management by providing stakeholders – governments, transboundary basin management authorities, public utilities and water users – with near real-time water data in an accessible and geographically specific form.

Why is WASA needed?

- Demographic, economic and climatic changes have given rise to a ‘perfect storm’ of water security challenges that threaten to undermine growth, food security, sanitation and ecosystems.
- Past efforts to address Africa’s water security challenges have been hampered by inadequate planning and investment due to lack of reliable long-term data and capacity to assess the implications of change for water security at national, sub-regional and continental levels.

What makes WASA feasible?

- **Open Data Cube** (ODC) technology, developed by the Australian government and Committee on Earth Observation Satellites (CEOS), makes possible a digital transformation that can better inform land and water management, using a novel platform of historical satellite imagery. Agriculture is also a driver of degradation and loss.
- Global Partnership for Sustainable Development Data launched the **Africa Regional Data Cube** (ARDC), based on ODC technology, to help 5 African countries address problems with agriculture, deforestation and water access.
- A suite of applications using data from ARDC is needed to translate satellite images into decision-making tools for policy and investment dealing with water availability, variability, use and quality and ecosystem management.

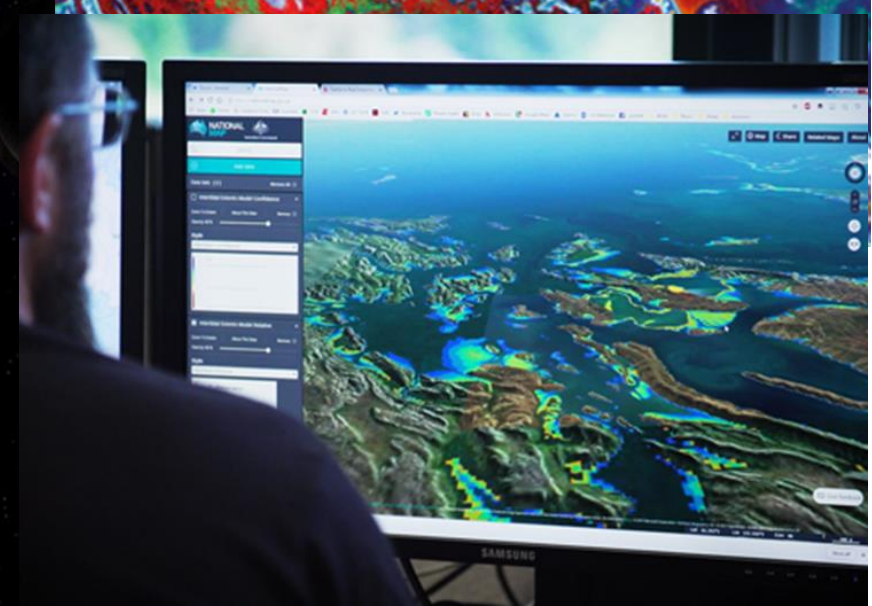
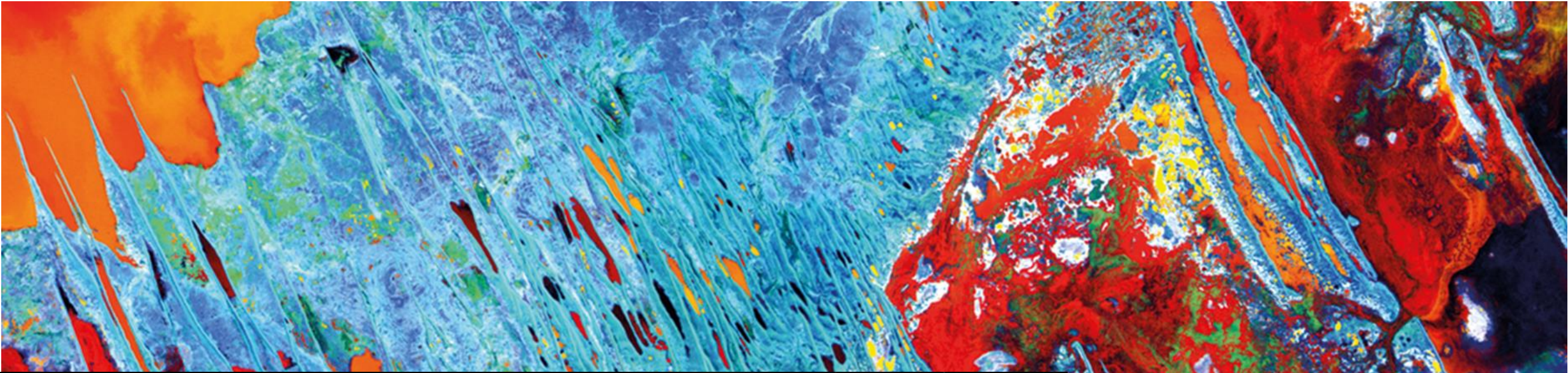


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A Growing Network of Compatible Open DataCubes

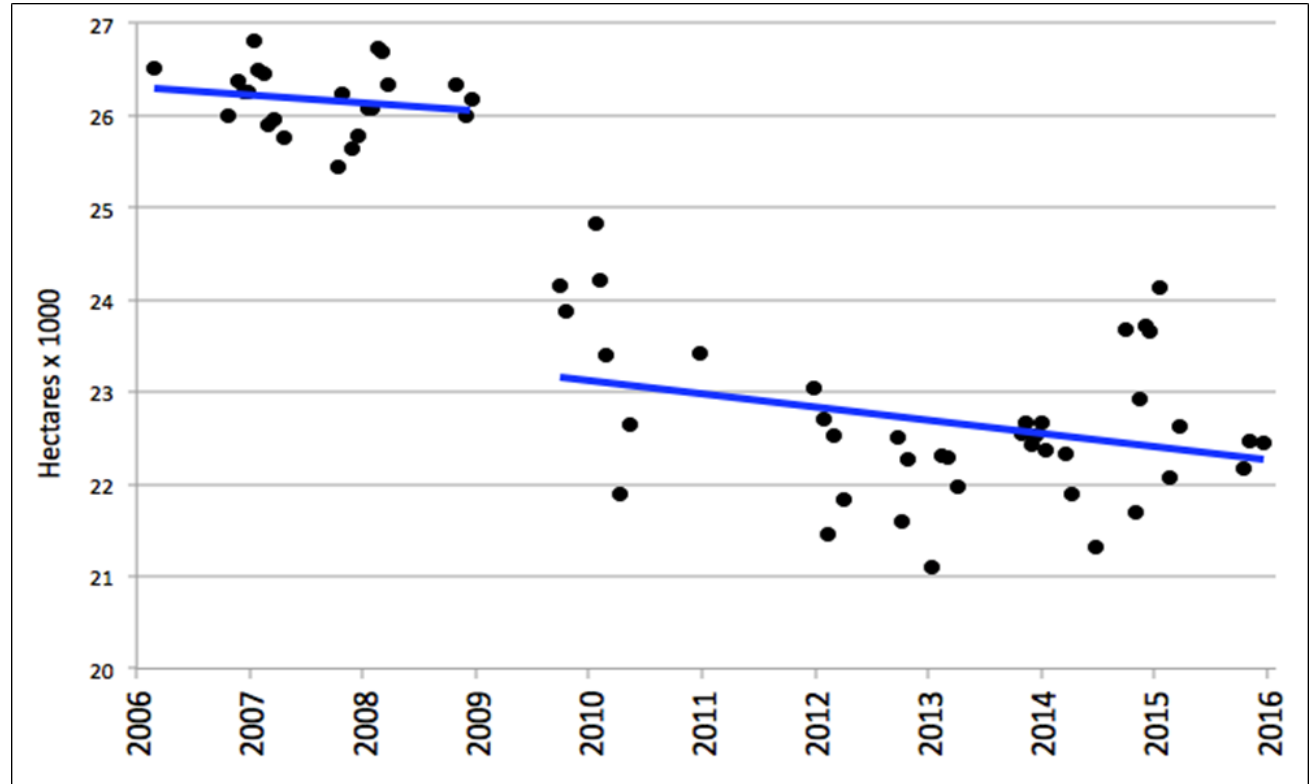
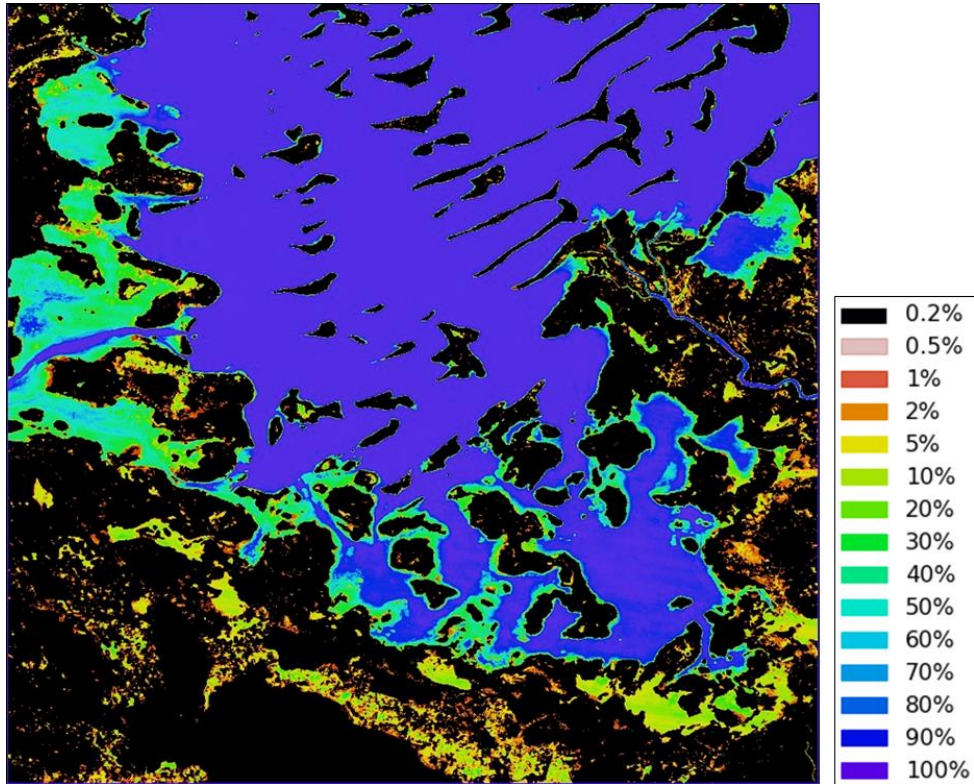


Source: Dr. Stuart Minchin, Geoscience Australia

How will WASA leverage innovation?

- To address the most urgent data and information needs of African governments, continental organizations (AMCOW and AUC), industry and water users associations, WASA, its partners and a cadre of young African fellows will:
 - a) Develop and pilot water security apps (e.g., digital toolkits to aid data-based decisions) in one or two countries;
 - b) Scale up these apps across Africa and build an **African Water Security Information System**.
- Priority issues: water accounting, irrigation efficiency, sanitation services assessment, flood and drought monitoring and early warning, water productivity assessment, groundwater mapping and assessment, indications of ecosystem degradation.

Water Observations from Space: Lake Chad



Source: Dr. Stuart Minchin, Geoscience Australia

How will WASA be implemented?

Working with AMCOW, AUC and public and private sector partners as well as ARDC, WASA will in:

- **Phase 1** – Develop and test a suite of water planning and management apps that build on ODC technologies in one or two African countries.
- **Phase 2** – After **Digital Earth Africa** is launched, scale out the suite of apps across Africa and develop an African Water Security Information System.
- Digital Earth Africa will engage other CGIAR Centers to broaden the suite of apps to address other challenges associated with sustainable, resilient landscapes and ecosystems.

Tentative Budget

Phase 1: US\$ 5 million

Phase 2: US\$ 25 million

Expected outcomes

- Phase 1: Stronger water security in one or two target countries, resulting from use of water planning and management apps to support national and local water security assessments.
- Phase 2: Stronger water security across the continent, resulting from widespread use of an African Water Security Information System.
- **Overall:** More effective planning and investment in water resources to support economic growth, improve livelihoods and sanitation, sustain ecosystems and enhance resilience to water-related threats.

Thank you.

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For further information on WASA Initiative

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Photo: Adam Öjdahl /IWMI